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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHANNAVAJJALA, LAKSHMI SARADA

ART UNIT PAPER NUMBER

1615

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/821,480	CANNELL ET AL.	
	Examiner	Art Unit	
	Lakshmi S Channavajjala	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-120, 152-155 and 161-163 is/are pending in the application.
4a) Of the above claim(s) 41-120, 152-155 and 163 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) 1-40, 161 and 162 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6-7-04 has been entered.

Claims 1-40, 161 and 162 are being examined.

Claim Rejections - 35 USC § 112

Claim 9 recites the limitation "anionic" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

Claims 1, 2, 10, 25, 27-30 and 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,660,838 to Koga et al.

Koga discloses external use preparations comprising xylobiose, in amount of 0.0001 to 20%, preferably 0.1 to 10%. The composition of Example 4 (col. 9) contains xylobiose and a film-forming agent, polyvinyl alcohol. Koga discloses the composition in the form of a cream, lotion, ointment etc (col. 10, claim 3) and also discloses addition of cosmetic additives such as polyethylene glycol monostearate (example 7 and col. 2-3), which reads on the claimed additive (claim 150). While example 4 is directed to a pack, instant claims are directed to a composition and the limitation "for durable non-permanent shaping", which is an intended use that carries no

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patentable weight. Koga discloses the claimed amounts of xylobiose in the hair compositions and accordingly the ability to impart the claimed effect is inherent to Koga. Therefore, Koga anticipates the instant claims.

Claims 1-4, 10-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US 2002/0031483 A1 to Beck et al (hereafter collectively Beck).

Beck teaches a hair treatment composition comprising a compound chosen from a TCA cycle intermediate, a carbohydrate, a sugar, a fatty acid product or a glycolysis product. Appropriate sugars include trioses such as glyceraldehydes (aldose), and dihydroxyacetone (ketose), tetroses such as erythrose, threose, and erythrulose, pentoses such as ribose, arabinose, xylose, lyxose, ribulose and ribulose phosphate and xylulose, which read on instant claims 121-135. Further, Beck teaches Furanoses, pyranoses, phosphate derivatives of sugars (page 1, paragraph 0015). In col. 2, paragraph 0041, Beck teaches the film-forming cationic polymers such as Polyquaternium 16, which is also claimed. Beck also teaches that the composition preferably contains 0.01% to 0.5% of the useful compounds (page 1, paragraph 0018), which falls within the claimed range of 0.01% to 10%. Beck teaches the compositions in the form of a shampoo or used in a conditioner composition, which read on the instant dispersion or emulsion (page 1, paragraph 0020). Further, Beck suggests addition of suitable surfactants, polymers, conditioning agents, adjunct materials and water to the compositions (pages 2 and 3, and examples 4-9 on page 5).

Beck teaches that the composition is used for hair treatment, in particular for oxygen consumption of hair follicle and thus stimulating the hair growth. Beck does not teach instant

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durable non-permanent shaping of hair. However, as explained the recitation of intended use does not carry patentable weight in composition claims. Further, amount of compounds taught by Beck is within the claimed range of monosaccharides. Accordingly, it would have been obvious of one of an ordinary skill in the art at the time of the instant invention to use the monosaccharides i.e., trioses, tetroses etc., containing various cosmetic additives such as cationic polymers (Polyquaternium series of compounds) in the hair treatment composition in the range of 0.01 to 0.5% with an expectation to stimulate the growth of hair follicle because beck suggests that the sugars provide the required oxygen supply for the growth of hair follicle.

While Beck does not recognize the claimed effect, Beck teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing 0.01% to 0.5% of sugars such as trioses or tetroses possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Beck, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

Claims 1, 2, 5, 6, 10-16, 24-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,900,545 to **Wisotzki**.

Wisotzki teaches hair compositions containing panthenol, at least mono or disaccharides of pentoses or hexoses, one triol and at least one polyvinylpyrrolidone (lines bridging col. 1-2). Among the pentoses and hexoses, Wisotzki teaches aldoses and ketoses or their mixtures containing C5 to C6 atoms, the suitable monosaccharides including xylose, glucose, ribose,

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arabinose, sorbose etc (col. 2, lines 36-49 and claims for the amounts of sugars). Wisotzki also states that technically all naturally occurring mixtures of mono or disaccharides are suitable for the hair regenerating hair-split ends and revitalizing hair. The polyvinylpyrrolidone film-forming polymer of Wisotzki meets instant claimed nonionic polymer. Accordingly, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to use the composition of Wisotzki containing sugars, in particular aldoses and ketoses, and film-forming polymer PVP for treating hair to revitalize hair by regenerating split ends because Wisotzki suggests that the combination of sugars, panthenol and PVP have a considerably high healing rate in regenerating the split ends of hairs caused to permanent waving or dyeing of hairs. Further, while Wisotzki teaches pentoses and hexoses as opposed to the claimed C3 to C5 monosaccharides, Wisotzki teaches both hexoses and pentoses are equally effective in regenerating and revitalizing hair and teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing sugars of Wisotzki possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Wisotzki, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

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Claims 1, 2, 5-16, 24-40, 161 and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,690,924 to Keil et al (Keil) in view of over US 4,900,545 to **Wisotzki**.

Keil teaches hair treatment compositions comprising chitosan, 2-pyrrolidone carboxylic acid and anionic or nonionic film forming polymers or other natural film forming polymers for increased combability, care and fixing of hair. Among the film-forming polymers, Keil suggests the polymers of the instant claims (col. 2, lines 35-61) such as LUVISKOL. The examples of Keil are directed to hair compositions (hair fixing as well as a shampoo with hair fixing action-example 10) and contain various film-forming polymers (see col. 5-8). Keil teaches cosmetic additives of the instant claims but does not teach the instant monosaccharides.

Wisotzki teaches hair compositions containing panthenol, at least mono or disaccharides of pentoses or hexoses, one triol and at least one polyvinylpyrrolidone (lines bridging col. 1-2).

Among the pentoses and hexoses, Wisotzki teaches aldoses and ketoses or their mixtures containing C5 to C6 atoms, the suitable monosaccharides including xylose, glucose, ribose, arabinose, sorbose etc (col. 2, lines 36-49 and claims for the amounts of sugars). Wisotzki also states that technically all naturally occurring mixtures of mono or disaccharides are suitable for the hair regenerating hair-split ends and revitalizing hair. The polyvinylpyrrolidone film-forming polymer of Wisotzki meets instant claimed nonionic polymer.

Accordingly, it would have been obvious of one of an ordinary skill in the art at the time of the instant invention to use the monosaccharides of Wisotzki in the hair treatment composition of Keil containing the film-forming polymers for fixing the hair, with an expectation to regenerate and revitalize hair because Wisotzki suggests that the combination of sugars, panthenol and PVP have a considerably high healing rate in regenerating the split ends of hairs

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caused to permanent waving or dyeing of hairs. Further, while Wisotzki teaches pentoses and hexoses as opposed to the claimed C3 to C5 monosaccharides, Wisotzki teaches both hexoses and pentoses are equally effective in regenerating and revitalizing hair and teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing sugars of Wisotzki possess the ability to impart the claimed durable non-permanent shaping of hair fibers. With respect to the limitation heat-activated, instant claims does not state the temperature or the process of heating. However, the composition of Wisotzki, upon application to skin, undergoes a temperature shift due to the normal body temperature and thus meets the claimed requirement.

Response to Arguments

Applicants' arguments with respect to the rejection under 35 USC 112, first paragraph are persuasive and accordingly the rejection has been withdrawn.

Applicant's arguments filed 6-7-04 have been fully considered but they are not persuasive.

KOGA- 102(b)

Applicants argue that HPMC has been excluded from the list of film forming polymers, by virtue of the proviso and Koga only discloses HPMC but not the film-forming agent as claimed. Accordingly, it is argued that Koga does not anticipate instant claims. However, as explained in the rejection above, Koga teaches a composition comprising xylobiose and PVA, a film-forming agent that meets the claimed composition. As also explained, instant claims are

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directed to a composition and not a method and therefore, the skin pack composition of Koga (example 4) still reads on the instant claims.

BECK- 103:

Applicants argue that examiner rejects claims based on isolated passages within Beck to arrive at the claimed invention, without any motivation to do so. Applicants argue that Beck fails to specifically suggest the desirability of C3-C5 saccharides from the trioses to hexoses.

Examiner notes that during the interview on 7-13-04, it was mentioned to examiner that applicants will consider submitting a declaration showing comparative testing of prior art compositions. However, applicants have not provided any unexpected results with C3-C5 sugars as opposed to C6 sugars. Accordingly, examiner maintains that absent any criticality, one of an ordinary skill in the art would expect the sugars in the range of trioses to hexoses to show the same effect. Applicants argue that there is no suggestion that the polymeric cationic conditioning agents of Beck must be film-forming agents, much less the composition containing a film-former and C3-C5 saccharides. However, Beck teaches the film-forming cationic polymers such as Polyquaternium 16, in combination with sugar (sucrose) in the example. However, Beck also teaches trioses to hexoses as equivalent for hair care application.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the

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applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Further, Beck also teaches the composition for hair treatment and for conditioning. Besides, irrespective of the fact that Beck recognizes Polyquaternium for film-forming the property is implicit for the compound. Accordingly, one of an ordinary skill in the art would have achieved the same result as that of the instant, absent evidence to the contrary.

KEIL AND BECK:

Applicants statement that examiner relies on Keil for teaching trioses, tetroses and pentoses, and film-forming polymers is not true. The rejection (above) admits that Keil teaches hair compositions with film-forming polymers, but fail to teach the claimed monosaccharides. The teachings of Beck have been cited to provide the motivation to add monosaccharides to the composition of Keil. Applicants argue that Keil teaches away from the combination of references because Keil teaches away from cationic polymers. However, instant rejection clearly excludes the claims directed to cationic polymers and accordingly, the point is moot. Therefore, the rejection has been maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 7.30 AM -4.00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lakshmi S Channavajjala
Examiner
Art Unit 1615
September 14, 2004